(F) Transportation

Purpose

The Transportation Element provides a general inventory of existing conditions and trends covering multiple modes of transportation within the City of Carrollton. Additionally, this section takes a detailed assessment of existing transportation characteristics to assist the City in determining infrastructure needs to support future population and employment forecasts.

More specifically, this section takes a general inventory of:

- Road Network
    - Roads
    - Highways
    - Bridges
    - Connectivity
    - Signalized Intersections
    - Signage
- Alternative Modes
    - Bicycle Paths
    - Pedestrian Facilities
    - Public Transportation
- Parking
    - Areas with insufficient/inadequate Parking
    - Surface Parking Facilities in need of retrofitting or redevelopment
- Railroads, Trucking, Port Facilities and Airports
    - Freight and Passenger Rail Lines
    - Major Rail Intermodal Facilities
    - Non-rail freight Operations
    - Air Terminals
- Transportation and Land Use Connection
    - Areas with Significant Traffic Congestion
    - Underutilized Transportation Facilities

1. Road Network

The City of Carrollton contains approximately 280 miles of streets and roadways. The City is bisected east to west by US Hwy 27, a 4-lane thoroughfare that is the primary source of commercial thru traffic. Land uses within the City and adjacent to US Hwy 27 are predominately commercial with sporadic single-family residential uses. This transportation corridor provides a north south rout for City residential, commercial and industrial commuters.

State Route 16 (a.k.a. Newnan Highway) and State Route 166 (Bankhead Highway) provide the primary east to west access to Carrollton while Maple and Alabama Streets feed east bound commuters into the City. All four east/west access points are considered Major Collector roadways.

1.1 Streets, Roads, and Highway

The City's road network (*shown Appendix x)* has evolved over time, beginning with a radial system centered around the traditional downtown grid pattern (typical to downtowns developed during the1800's) and then subsequently developing into a corridor system to accommodate higher volumes of traffic resulting from the advent of the automobile.

The table below details the lane miles or roadways in Carrollton for the years 1997, 2000, and 2003. The lane miles are classified as state highways, county roads, and city roads.

Mileage of Public Roads (1997, 2000, 2003)

Type or Road	1997	2000	2003
State Highway	30.89	35.26	35.18
County Roads	17.68	16.98	17.80
City Roads	182.63	185.94	205.4
Total Mileage	231.20	238.18	258.38

Georgia Department of Transportation

As indicated above, between 1997 and 2003, the City of Carrollton's road network increased moderately to meet the growth demand in population and employment.

The two charts on the following page compare Carrollton's lane mileage to the cities of Douglasville and Rome. Douglasville was chosen to compare Carrollton to a municipality currently experiencing a rapid rate of population growth, while Rome was used as a jurisdiction comparable to Carrollton's population and general economic growth.

As indicated below, the growth of the City of Carrollton's road network between 1997 and 2003 was evenly distributed between State and Local roadways. Comparably, Carrollton's total increase in public roadways was almost identical to that of the City of Rome but significantly less than Douglasville.

Mileage of Public Roads Comparison (1997, 2000, 2003)

Type or Road	1997 # of miles			2000 # of miles			2003 # of miles		
	Rome	Douglasville	Carrollton	Rome	Douglasville	Carrollton	Rome	Douglasville	Carrollton
State Highway	86.50	51.04	30.89	99.96	51.04	35.26	124.77	51.00	35.18
County Roads	56.50	32.94	17.68	55.88	32.94	16.98	55.11	32.94	17.80
City Roads	349.69	109.87	182.63	346.05	136.41	185.94	368.51	145.43	205.40
Total Milage	492.69	193.85	231.20	501.89	220.39	238.18	548.39	229.37	258.38

Georgia Department of Transportation and City Planning and Zoning Department

1997 – 2003 % Change in Mileage of Public Roads

Type of Road	Rome	Douglasville	Carrollton
State Highway	44.20%	-0.10%	13.90%
County Roads	-2.50%	0.00%	0.70%
City Roads	5.40%	32.40%	12.50%
Total Mileage	11.30%	18.30%	11.80%

Georgia Department of Transportation and City Planning and Zoning Department

Another point of interest for the City of Carrollton's road network is the even participation in both City road development and roads constructed through state funded resources. Unlike that of Douglasville and Rome, this could indicate a positive funding balance of to meet the transportation demand of the City's population and economic growth. How to maintain even distribution of financing necessary to meet future transportation this balance in new road construction projects will be important to the City's road network.

Estimate Traffic Volume

The information below demonstrates traffic count data collected from the Georgia Department of Transportation and the *Carrollton Downtown Master Plan* for major roads within the Carrollton area.

Road Station #	Count Location	1997 AADT	2004 AADT	Percent Change
12	S. Bypass @ Central Rd	29697	30460	2.5%
127	Alabama St @ Pearl St.	9068	9450	4.2%
132	Newnan Hwy. @ Oak Mnt. Trail	10033	10740	7%
252	Tyus/Carrollton Rd. @ Bonner Rd.	17690	18930	7%
256	166 Bypass @ Tabernacle Rd.	15735	16770	6.6%
369	Stewart St @ N. White St.	3024	3710	22.7%
Source: Georgia Department of Transportation / AADT = Average Annual Daily Traffic				

Average daily traffic is typically measured by machine counts. Depending on the purpose of the traffic analysis, directional counts can be collected or total counts not taken into account direction. Measuring traffic volumes assists in determining present demand for service on street and highways and assists with determining new facilities or improvements to an exiting transportation networks.

Capacity Analysis and Levels of Service (LOS) Indicators

The LOS is calculated by taking the traffic volume for a roadway (AADT) and dividing it by the design capacity for that roadway. The capacity analysis used in the "LOS Indicators" chart below is based on Highway Capacity Software (HCS) Analysis, Chapter 7, and using the following standard for roadway types:

Capacity Analysis, Based on Highway Capacity Software (HCS) Analysis	
Roadway Type	**Typical Capacity**
2-Lane Undivided	16,000 Vehicles
4-Lane Undivided	38,000 Vehicles
4-Lane Divided	45,000 Vehicles
6-Lane Divided	67,000 Vehicles
8-Lane Divided	80,000 Vehicles

LOS is an indicator of the extent or degree of service provided by, or proposed to be provided by, a facility based on and related to the operational characteristics of the facility. A minimum Level of Service 'D' (high density, stable flow) should be maintained for peak travel times near major commercial and industrial areas, freeway interchanges, and central business districts in cities. The typical LOS classification thresholds are shown in the table on the following page:

Level of Service (LOS) Indicators

LOS	General Characteristics	V/C Ratio	Average Delay in Seconds
A	Free flow traffic with individual users virtually unaffected by the presence of others in the traffic stream	.00 - .25	< 10
B	Stable traffic flow with a high degree of freedom to select speed and operating conditions but with some influence from other users	.25 - .55	10-20
C	Restricted flow which remains stable but with significant interactions with others in the traffic stream. The general level of comfort and convenience declines noticeably at this level	.55 - .77	20-35
D	High-density flow in which speed and freedom to maneuver are severely restricted and comfort and convenience have declined even though flow remains stable	.77 - .93	35-55
E	At capacity; unstable flow at or near capacity levels with poor levels of convenience and comfort, very little, if any, freedom to maneuver	.93 – 1.00	55-80
F	Forced traffic flow in which the amount of traffic approaching a point exceeds the amount that can be served. LOS F is characterized by stop-and-go waves, poor travel times, low comfort and convenience and increased accident exposure	< 1.00	> 80

Source: Transportation Research Board, Highway Capacity Manual, 2000 update

Typically, local governments determine the Level of Service (LOS) that is acceptable to the community. LOS is an indicator of the extent or degree of service provided by, or proposed to be provided by, a facility based on and related to the operational characteristics of the facility. A minimum Level of Service 'D' (high density, stable flow) should be maintained for peak travel times near major commercial and industrial areas, freeway interchanges, and central business districts in cities. The typical LOS classification thresholds are shown in the following table:

Downtown Carrollton LOS

Roadway	Location	Volume (AADT)	Capacity	V/C	LOS
Johnson Ave.	Between Barnes St. and Rome St.	1,280	16,000	0.1	A
Martin Luther King, Jr. St.	Between Lambert and Alabama St	2,140	16,000	0.13	A
College St.	Between Robinson St. and Newnan St.	3,900	16,000	0.24	B
Cedar St.	Between Stewart St. and Perry St.	3,940	16,000	0.25	B
U.S. 27/SR 1 (N.Park Street)	Between Lambert St. and Johnson Ave.	11,860	45,000	0.26	B
Lee St.	Between Dixie St. and Clifton St.	4,260	16,000	0.27	B
Rome St.	Between Johnson Ave. and Ward St.	4,480	16,000	0.28	B
Cedar St.	Between College St. and White St.	5,450	16,000	0.34	B
Newnan Rd.	Between Bankhead Rd. and West Ave.	5,450	16,000	0.34	B
Bradley St.	Between Presbyterian and Adamson Square	5,650	16,000	0.35	B
Austin Ave.	@ Adamson Ave.	5,680	16,000	0.36	B
Bradley St.	Between Lee St. and Minden Pl.	6,590	16,000	0.42	B
Dixie St.	Between Alabama St. and West Ave.	7,150	16,000	0.45	B
U.S. 27/South Park	@ Maple St.	21,690	45,000	0.48	B
U.S. 27/SR 1 (South Park Street)	Between Center St. and South St.	21,920	45,000	0.49	B
Newnan St.	Between Tanner St. and College St.	18,620	38,000	0.49	B
Newnan St.	Between White St. and Jones St.	18,890	38,000	0.5	B
South St.	Between Park St. and Bradley St.	9,490	16,000	0.59	C
Alabama St.	Between Park St. and Cliff St.	9,900	16,000	0.62	C
Alabama St.	Between Cliff St. and Barnes St.	15,510	20,000	0.77	C

From the data presented in the above table and Figure II-5, the traffic volumes and corresponding LOS for the downtown area of Carrollton indicate that there is not a severe congestion (LOS D, E or F) problem. With the exception of a small section of Newnan/Alabama street, most of the downtown area streets function at an LOS B or better, which do not represent a serious congestion problems for the city. As earlier stated, the LOS function measures the amount of delay as it relates to congestion on a roadway. It is an indicator of the extent or degree of service provided by, or proposed to be provided by, a facility based on and related to the operational characteristics of the facility. Typically, as the LOS declines on roadways due to congestion, the travel speed decreases due to the delay (travel times increases). This is evident in the downtown Carrollton area, especially on the main east-west travel route, Newnan Street/Alabama

Street. During the public involvement process, several citizens also confirmed there is an issue with speeding and expressed some concern for safety in a high-pedestrian urban area. This matter will be further evaluated in the 'Transportation Recommendations' section in the Master Plan.

1.2 Bridges

There are 25 bridges maintained by the City of Carrollton, or Carroll County, all which are considered acceptable by the 2004 Georgia Department of Transportation Bridge Inspection report.

1.3 Signalized Intersections and Regulatory Signage

The City of Carrollton acts in accordance with federal regulations presented in the Manual of Uniform Traffic Control Devices (MUTCD) to regulate and guide traffic along all streets and highways within the City. These regulations cover traffic signals, pavement markers and signage in order to provide consistency in traffic control devices across jurisdictional lines throughout the United States.

The City of Carrollton currently maintains 22 traffic signals located at various intersections throughout town. Additionally, there are 23 traffic signals within the City that are currently maintained by the Georgia Department of Transportation.

Regulatory signs notify road users of traffic laws or regulations and indicate legal traffic requirements. These signs consist primarily of Speed Limit, Stop and Yield signs and range is size. The following summarize the City of Carrollton total street sign inventory as of April, 2005.

Size	Number of Signs
9''	540
12''	29
12'' Overhead	19
18'' Overhead	10

2. Alternative Modes of Transportation

The creation of alternative modes of transportation within the City of Carrollton is extremely important. The City recognizes the importance of movement in and around town, particularly within downtown, and the need for more than just roads to facilitate and promote a safe and mobile community. This statement is evident with the City's recent investment in a Downtown Master Plan, a professional and publicly designed document aimed at evaluating streetscape, open space, land use and transportation improvements in Carrollton.

2.1 Bicycle and Pedestrian Walkways

A broad system of pedestrian and bicycle facilities is an important element of a high quality community. Sidewalks provide pedestrians with a convenient and safe access to local amenities and recreational opportunities. Bikeways promote both a recreational and alternative transportation opportunity for a various reasons, including children going to school and parents opting for light shopping opportunities. A system of bicycle and sidewalk facilities also provides an attractive streetscape by distinguishing a community from the automobile-oriented development found in most rural and suburban areas.

Sidewalks: Approximately 60-miles of sidewalks exist within the City of Carrollton with the highest concentrations found within the historic downtown. From downtown, a sidewalk network spreads to several neighborhoods and commercial centers.

In 2005, an inventory of the existing sidewalk conditions in the city was completed. This inventory describes roadways with sidewalks on either one or both sides and areas with no sidewalk. The inventory of existing sidewalks in the city included the downtown Carrollton area only. Locations with existing sidewalks will be analyzed by the condition of the sidewalk by categories such as good, fair or poor.

The overall pedestrian network is in good condition, as it relates to sidewalks and pedestrian enhancements on the downtown square. This is due to sidewalk and other streetscape elements recently installed. In terms of the conditions of the existing sidewalks in other CBD areas, they should be considered only fair as it relates to the actual availability/existence of sidewalks. However, in terms of the conditions there are some minor deficiencies that do not meet the American Association of State Highway and Transportation Officials (AASHTO), Americans with Disabilities Act (ADA) or GDOT standards. Recommendations for sidewalks and other pedestrian elements will be included in the Transportation Recommendations section.

The following aerial (Figure II-7) provides a graphical illustration of the existing sidewalk conditions for the downtown Carrollton area.

Bikeways: There are no designated on-street bicycle lanes within Carrollton; however, several roadways have shoulders that accommodate cyclists.

2.2 Public Transportation

The only public transportation system in Carrollton is provided by the City Parks, Recreation and Cultural Arts Department and is for local seniors only. Transportation options provided to seniors includes transit to and from the Senior Center, as well as, transport for special events.

2.3 Greenbelt

In 2002, the City partnered with a small group of citizens to create a Greenspace program for the community. During the meetings, the committee, made up of representatives from the Planning Department, the Recreation Department and local citizens, recognized an opportunity to create a greenbelt, or multi-use path, around the city that would connect four schools, several commercial areas, and many of the existing neighborhoods. The committee formalized this proposal by creating a 30-year implementation plan to build a 14-mile multi-use trail that could be used for recreation and non-motorized transportation by everyone in the community.

Since the development of the concept in 2002, the Mayor and Council, city staff, and community activists have participated in a fundraising effort to kick-off the Greenbelt Program. The Mayor and Council purchased (using state Greenspace allocation funds) a 26-acre tract on Hays Mill Road adjacent to Buffalo Creek. The Recreation Department secured a $100,000 Land and Water Conservation Fund Grant for developing trails and hardscaping on this tract, as this property will serve as Phase I for the Carrollton Greenbelt and will connect Hays Mill Road with the City of Carrollton School Campus. Also, since the development of the concept, federal and state grants have been awarded for the project in excess of one million dollars.

3. Parking

Parking is not a major issue for the City of Carrollton; however, there is a perceived lack of parking available in the Downtown Historic District. As such, and with the recent completion of the *Carrollton Downtown Master Plan, an* analysis of opportunities to redesign and reconfigure existing parking areas was performed.

The parking analysis evaluated both the current and projected needs for off-street parking in the downtown area. The primary methodology for the analysis was a spatial analysis of all property currently used for off-street parking in downtown Carrollton. For a more comprehensive parking study, reference "City of Carrollton, Central Business District Parking Study," by Neel-Schaffer, Inc., dated December 4, 2001.

To determine the existing number of off-street parking spaces in the downtown study area, careful examination of recent aerial photographs were supplemented by field surveys. Properties identified as parking lots were mapped for ease of identification.

Because it is anticipated that no change to the existing parking configuration in the square is recommended by the Master Plan, the parking spaces around Adamson

Square were not included in the analysis. Similarly, this Plan did not provide an inventory of all of the on-street parking throughout downtown Carrollton.

The result of this analysis, shown in the table below, identified a total of 681 off-street spaces within the downtown Carrollton study area. One of the most notable aspects of this existing parking inventory is the inefficient configuration of parking spaces and driving lanes. As a result, the Recommendations section of the Plan specifically enumerates the number of additional spaces that could be added by simple re-striping and re-configuration of the existing parking lots. (excerpts taken from the *Carrollton Downtown Master Plan)*

Existing Off-Street Parking Estimates

Quadrant	Parking Spaces
SE – Courthouse Area	79
SE – Proposed Parking Deck Area	124
SE – City Market Area	68
SW – City Hall Area	138
SW – Presbyterian Avenue Area	76
NW – Cultural Arts Center Area	74
NE - Old City Hall Avenue Area	122
TOTALS	681

4. Railroads and Airports

Airports: There is no airport within the City limits of Carrollton. The West Georgia Regional Airport is located adjacent to Mt. Zion and northwest of Carrollton, near U.S. 27. The airport has a 5,500 ft. asphalt runway and serves over 10,000 annual passenger and commercial flights. While no commercial passenger service is available, the airport does support corporate jets.

Hartsfield/Jackson Atlanta International Airport (HJAIA) is located approximately 50 miles from Carrollton in the southwest portion of Atlanta, which is a relatively easy commute for business and personal use. Over 30 airlines provide international, national, regional and local passenger and commercial use.

Railroads: There are no passenger rail lines or facilities within the City of Carrollton. There is, however, a Norfolk Southern Railway that serves a number of existing industrial sites.